# Presentation 19 - Han Kang



### Preliminary Findings

Reported Unexplained Multisymptom Illness Among Veterans Who Participated in the VA Longitudinal Health Study of Gulf War Era Veterans

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### Unexplained Multisymptom Illness

- Several different symptoms together that persist for 6 months or longer
- Not adequately explained by conventional medical or psychiatric diagnoses
- May be diagnosed as chronic fatigue syndrome, fibromyalgia, irritable bowel syndrome, or multiple chemical sensitivity



Presence of Unexplained Multisymptom Illness for 6 Months or Longer

	Gulf		Era	
	Number	%	Number	%
No	3751	65	3104	90
Yes	2016	35	355	10
Total	5767	100	3459	100

Demographic Characteristics of Veterans by Gulf War Deployment and Presence of Multisymptom Illness

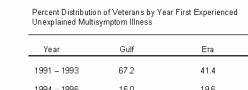


		ulf SL %	Er: MS	a 61, %	
Demographics	Yes	No	Yes	No	
Gender					
Male	75	82	69	78	
Female	25	18	31	22	
Race					
White	70	80	77	82	
Black	21	14	17	12	
Hispanic	6	3	3	3	
Others	3	3	3	3	
Marital Status					
Married	56	55	60	62	
Single	38	40	31	33	
Others	6	5	9	5	
Median Age (1991)	30	29	33	33	

Military Characteristics of Veterans by Gulf War Deployment and Presence of Multisymptom Illness



	M	SI. %	MS	SI, %	
	Yes	No	Yes	No	
Rank					
Enlisted	88	81	82	75	
Officer	12	19	18	25	
Branch					
Air Force	9	15	13	13	
Army	73	59	68	65	
Marine	9	11	8	9	
Navy	9	15	11	13	
Component					
Activ e	34	38	40	39	
Guard	32	27	26	27	
Reserve	34	35	34	34	



1994 – 1996 15.0 19.6 1997 – 1999 8.7 18.2 7.3 2000 - 2002 16.9 2003 – 2005 1.9 3.9 1995 Median Year 1992

Effects of Activities on Gulf War Veterans' Unexplained Illness Symptoms



Activity	Effects on Symptoms, %						
	Worse	No effect	Better	Not sure	Nottried	B/W*	
Light exercise	19.7	38.1	11.9	24.7	5.4	0.6	
Vigorous exercise	36.6	21.9	8.0	19.8	13.5	0.2	
Smoking tobacco	5.3	21.3	2.0	16.0	55.1	0.4	
Drinking alcohol	7.6	28.9	6.5	22.2	34.6	0.9	
Maintaining a busy work or social schedule	24.5	38.6	5.1	24.2	7.4	0.2	

\* % Better/ % Worse

Activity	Effects on Symptoms, %					
	Worse	No effect	Better	Not sure	Not tried	BM
Maintaining a generally well-balanced diet	1.9	44.7	12.4	30.2	10.6	6.5
Adopting specific eating	2.2	34.7	11.3	26.4	25.2	5.0
Maintaining a regular sleep schedule	5.3	47.0	10.4	26.0	11.1	2.0
Cutting back on work or social activities	4.9	39.9	13.6	24.3	17.1	2.8
Avoiding stressful situations	3.9	36.6	20.0	26.0	13.2	5.0
Avoiding exposure to certain chemicals or smells	4.4	24.4	14.3	27.8	28.8	3.3

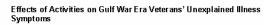
\* % Better/ % Worse



Effects of Activities on Gulf War Era Veterans' Unexplained Illness Symptoms

Activity		Effects on Symptoms, %							
	Worse	No effect	Better	Not sure	Not tried	B/W			
Light exercise	18.3	38.2	15.8	19.3	8.1	0.9			
Vigorous exercise	35.2	21.2	7.5	16.7	19.2	0.2			
Smoking tobacco	7.0	17.6	3.2	17.6	54.4	0.4			
Drinking alcohol	9.8	25.1	6.8	20.6	37.5	0.7			
Maintaining a busy	23.2	33.5	9.0	21.2	13.0	0.4			
work or social sched	ule								

<sup>\* %</sup> Better/ % Worse





Activity	Effects on Symptoms, %						
	Worse	No effect	Better	Not sure	Nottried	B/W*	
Maintaining a generally well-balanced diet.	2.2	36.9	20.4	29.4	10.9	9.1	
Adopting specific eating	2.5	29.9	17.8	23.3	26.3	7.1	
Maintaining a regular sleep schedule	4.0	42.0	14.7	23.5	15.7	3.7	
Cutting back on work or social activities	5.2	34.3	18.3	22.5	19.5	3.5	
Avoiding stressful situations	s 29	30.4	25.1	25.9	15.4	8.4	
Avoiding exposure to certain chemicals or smells	n 3.4	23.0	13.6	28.7	31.0	3.9	

<sup>\* %</sup> Better/ % Worse



#### How Would You Rate the Condition Now?

Rating	Gulf	Era
Completely recovered	2.3%	5.9%
Much improved	7.3%	12.6%
Somewhat improved	13.9%	22.6%
About the same	35.8%	28.0%
Somewhat worse	25.2%	20.8%
Much worse	15.2%	9.7%

Category of Treatments that Veterans Have Used for the Unexplained Illness Symptoms

reatments	Helped (n)	Made Worse (n)	Ratio**
Prescription Drug	889	175	5.1
Over the Counter Drug	546	62	8.8
Others*	412	135	3.1
Physical Therapy, Surgery	262	85	3.1
Nutrition Supplement and Dieting	207	36	5.9

\*Others include acupuncture, massage, meditation, prayer, relaxation therapy, illegal drug use, cognitive therapy, counseling, interpersonal skills, sleep management, psychotherapy, etc.

 $<sup>^{\</sup>prime\prime}$  A ratio of the number of veterans helped/the number of veterans whose symptoms got worse.

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Top 10 Treatments That Helped Gulf War Veterans' Unexplained	4
Symptome	P

Symptoms				
Treatments	Number	Percent		
Generic OTC medication	181	7.8		
Dieting and Nutritional Supplements	175	7.6		
Physical therapy	138	6.0		
OTC non-opioid analgesics	131	5.7		
Rx antidepressants	126	5.4		
OTC non-opioid anti-inflammatories	93	4.0		
Rx anti-inflammatory agents	88	3.8		
Rx non-opioid analgesics	79	3.4		
Physical exercise	69	3.0		
Rx stomach acid blockers	62	2.7		

# A List of "Other" Treatments That Helped Gulf War Veterans' Unexplained Symptoms



Treatments	Number	Percent	
Acupuncture	5	0.2	
Magnets, polarity therapy	6	0.3	
Massage	26	1.1	
Breathing exercises	10	0.4	
Meditation, yoga	10	0.4	
Relaxation therapy	50	2.1	
Herbal medicine	40	1.7	
Illegal drug use	13	0.6	
Mental health (counseling, psychologist, psychiatrist)	50	2.1	
Radiation therapy	8	0.4	
Interpersonal relationship skills	s 11	0.5	
Sleep study	32	1.4	

# Effectiveness of Selected Treatments Reported by Gulf War Veterans



Treatments	N		ement, % Long-term	Affected All	d Sympto Some	oms,% Top 3 Symptoms Helped
Generic OTC medication	181	72	28	12	88	headache, joint pain, depression
Dieting & Nutritional Supplements	175	53	47	10	90	fatigue, joint pain, IBS
Physical therapy	138	90	10	5	95	joint pain, back pain, muscle pain
OTC non-opioid analgesics	131	91	9	8	92	headache, joint pain, muscle pain
Rx anti depressants	126	52	48	6	94	depression, anxiety, sleep difficulty

ı	Effectiveness of Non Conventional Treatments Reported by Gulf War Veterans
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Effectiveness of Non	Conver					by Gulf War Veterans
Treatments	N		Long-term	All	Some	Helped
Massage	26	80	20	20	80	muscle pain, joint pain, back pain
Meditation, Yoga , Prayer	10	60	40	22	78	anxiety, headache, muscle pain
Relaxation Therapy	50	84	16	15	85	joint pain, fatigue, headache
Herbal Medicine	40	69	31	11	89	memory loss, fatigue, joint pain
Sleep Study	32	69	31	13	87	fatigue, headache, sleep difficulty

## Summary



- A high percentage of Gulf veterans reported having experienced an unexplained multisymptom illness (MSI) than non-Gulf veterans (35% vs. 10%).
- The median year of MSI onset for Gulf veterans was 1992, while the same for non-Gulf Veterans was 1995.
- Exercise, smoking, drinking and maintaining busy schedule, on the whole, made MSI symptoms worse; while maintaining balanced diet, regular sleep, cutting back on work/social activities, and avoiding stressful situations and avoiding exposure to certain chemicals/smells, on the whole, made MSI symptoms better.
- At the time of completing survey, for Gulf veterans, the condition was getting better for 24%, about the same for 36%, and getting worse for 40% of veterans, while the corresponding figures for non-Gulf veterans were 41%, 28%, and 31%, respectively.

# Summary continued



- Prescription drugs and OTC drugs are by far the most common treatments that were used for the MSI symptoms.
- Among the "other" category, treatment by mental health providers (psychologist, psychiatrist, trained counselor), relaxation therapy, herbal medicine, sleep study, and massage, in descending order, were the most common treatments that provided alleviation from the symptoms.
- Top three symptoms that were helped by above treatments included headache, joint/muscle pain, fatigue, depression, anxiety, and sleep difficulty.